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June 12, 2013

Via ECFS

Marlene Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: American Cable Association *Ex Parte* Filing in the Virtual Workshop in Response to the Public Notice (DA 13-1136) on the Connect America Cost Model, WC Docket No. 10-90

Dear Ms. Dortch:

On May 17, 2013, the Wireline Competition Bureau released a Public Notice (DA 13-1136) in WC Docket No. 10-90 entitled *Wireline Competition Bureau Announces Availability of Version 3.1.2 of the Connect America Fund Phase II Cost Model and Adds Additional Discussion Topics to Connect America Cost Model Virtual Workshop.* In response today the American Cable Association ("ACA") filed in the virtual workshop the attached comments on the Support Threshold issue. Should you have any questions about these comments, please contact me.

This letter is being filed electronically pursuant to section 1.1206 of the Commission's rules.

Sincerely,

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Attachment: American Cable Association, Connect America Cost Model (CACM) Virtual Workshop Post, June 12, 2013, Virtual Workshop Topic: Support Threshold

cc: Steve Rosenberg
Carol Mattey
David Zesiger
Amy Bender
Katie King
Ed Burmeister
Heidi Lankau
Talmage Cox

American Cable Association
Connect America Cost Model (CACM) Virtual Workshop Post
June 12, 2013

Workshop Topic: Support Thresholds

Q1. One possible method for establishing the support threshold would be to estimate the average revenue per user (ARPU) that could be reasonably expected from voice and broadband services and make adjustments to take into account that not all locations passed will necessarily subscribe to one or both services over the full term of Phase II support. Is this an appropriate way to set the support threshold?

The ACA agrees that the support threshold should be set by estimating the ARPU that could be reasonably expected from voice and broadband services and then making an adjustment to take into account that not all locations passed will necessarily subscribe to one or both services over the expected funding period. Put another way, the support threshold should be equivalent to the expected ARPU from voice and broadband services multiplied by the expected take rate for those services.

Q2. The Bureau recognizes that there may be different take rates for standalone voice service, standalone broadband service, and a package that includes both voice and broadband, and that the number of locations connected (and therefore able to subscribe) will increase over time as deployment progresses. The Bureau previously sought comment (Calculating Average Per-Unit Costs) on the assumption that, on average, 80% of locations would subscribe over the Phase II time horizon, noting that take rate has a small impact on the cost per location passed. (To illustrate the point, if 60% of locations subscribe at the beginning of Phase II and 100% subscribe at the end of Phase II, that would represent an average subscription rate of 80% over the five-year period.) What assumptions for ARPU and take rate are appropriate for purposes of setting the funding threshold?

The take rate used to set the funding threshold should be the same take rate used to develop cost model assumptions.

The core principle that should guide the adoption of a take rate for setting the funding threshold is that the rate used should be the same take rate used to develop cost model assumptions. The FCC should not use one take rate for estimating costs and a different take rate for estimating expected revenues. Doing so would not only contradict widely accepted principles of network-planning and business case modeling, it would also over-compensate operators receiving Connect America Fund (CAF) Phase II funds.

When rational operators are making network investments, they use the same take rate to estimate both costs and expected revenues. From the perspective of an operator making a network investment, it makes no sense to use two different take rates—the take rate is a common assumption used across cost

and revenue models to determine with some level of precision whether a network build-out will produce a positive return. Using a different (and by definition, inaccurate) take rate for the cost model and for the revenue model will lead to an operator either investing in a network build-out with a negative return or passing on a build-out that would have resulted in a positive return. Any investor relying on a business case with different take rates will have an inaccurate view of the operator's appropriate cost of capital. Using different take rates for costs and revenues ultimately leads to inefficient investment.

In a typical network investment, the fixed cost of the network up to the curb of potential subscribers is incurred upfront, while the variable ("success-based") costs of a drop, network interface device and customer premise equipment are not incurred until locations subscribe to the operator's service. This reduces the risk that operators will invest in infrastructure that will go unused, and reduces the present cost of the network investment because the value of money declines over time.

The CAF model, however, compensates operators for these variable costs from the beginning of the Phase II funding term. The use of a levelized costing mechanism amortizes all costs, including variable costs, over the entire term of the CAF funding. In effect, the CAF model compensates operators for variable costs years before they happen. Even if the same take rate is used to establish the support threshold as is used to dimension costs, operators will still be over-compensated slightly.

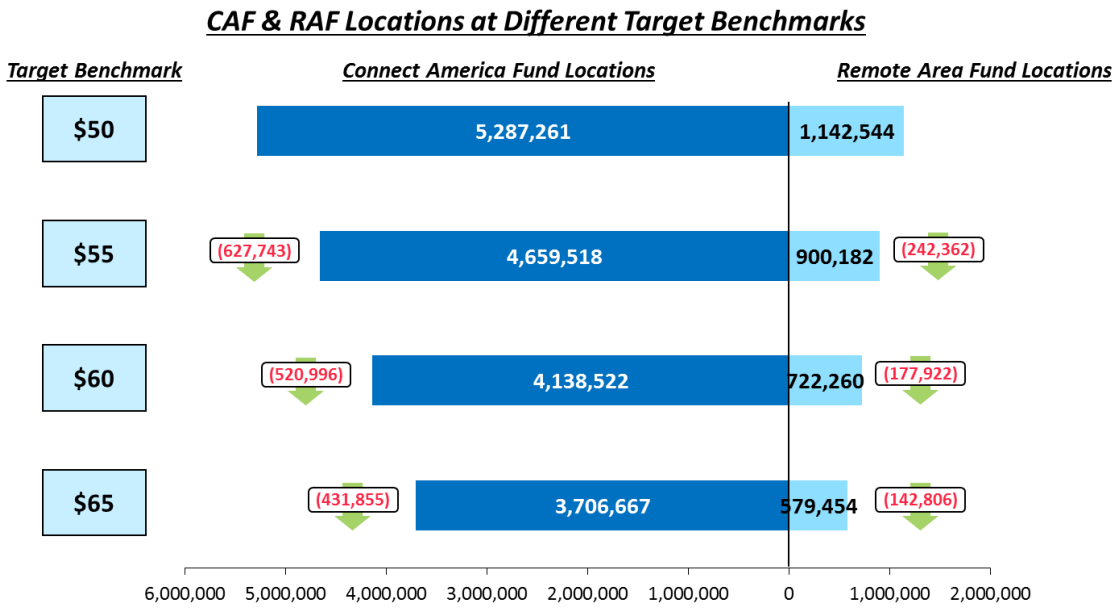
If one uses a higher take rate to estimate costs (say, 80%) and a lower take rate to estimate support thresholds (say, 50%), the excess subsidies will be amplified. The CAF model will include the variable costs for building out drops, NIDs and customer premise equipment to 80% of locations, while the setting of the support threshold suggests that only 50% of locations will actually end up subscribing. In this example, the CAF model would model funding for millions of drops, NIDs and customer premise equipment units that will never be installed.

The Wireline Competition Bureau appears to suggest, that "take rate has a small impact on the cost per location passed." This statement is a reference to an example offered by the WCB in the Virtual Workshop session on Calculating Average Per-Unit Costs (http://www.fcc.gov/blog/calculating-average-per-unit-costs-take-rate). ACA disagrees.

The Calculating Average Per-Unit Costs Virtual Workshop example did not demonstrate that the impact of the take rate on the cost per location passed was immaterial, but rather that it was small *relative* to its impact when using cost per subscriber to estimate costs. In the example given by the WCB, increasing the take rate from 50% to 70% increased the cost per subscriber by $89, but only increased the cost per location passed by $4. But even a $4 change in the support threshold can have a huge impact on the size of the subsidies distributed and the number of locations supported by the CAF. For example, lowering the target benchmark from $64 to $60 adds an additional 444,308 locations to the CAF that were not previously subsidized. In addition, every dollar by which the target benchmark is lowered adds an additional dollar of subsidy funding to all other locations covered by

the CAF. The net result is hundreds of millions of dollars of excess subsidies over the five-year term of the Phase II CAF—as well as eliminating wireline broadband subsidies for 100,000 or more locations above the technology cutoff. As the chart below demonstrates, shifting the support threshold ("target benchmark") by increments of $5 has enormous impact on the number of locations served by the CAF and the number of locations relegated to the Remote Areas Fund.[1]

In terms of take rate, a $5 shift in the target benchmark at the levels on the chart is indicative of a shift of less than 10% in the take rate, regardless of what ARPU benchmark is used. That is, if one assumes an $80 ARPU benchmark for voice and data services, the difference in take rate between a $50 target benchmark and a $55 target benchmark will be 6.25%.[2]



We will use the shift from a target benchmark of $55 to $50 to illustrate the financial impact of a shift in $5 of the target benchmark (or put another way, the financial impact of a shift of a <10% in the expected take rate). To understand the financial impact of the shift, one needs to consider two components: the excess subsidy given to locations between $55 and the alternate technology cutoff (in this case, $145) and the subsidy given to locations between $50 and $55. The total of these subsidies

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1 For this analysis, ACA has assumed a total annual fund size of $1.75 billion, changing the alternate technology cutoff to dimension the fund size consistently across varying target benchmarks.

2 ($55/$80) – ($50/$80) = .0625 = 6.25%.

is equal to the value of subsidies that would have gone to high-cost CAF locations above $145 that are now relegated to the uncertainties of the Remote Areas Fund.

The total excess subsidy over the five-year term of CAF Phase II funding is $1,450,651,058—or 16.5% of all CAF Phase II funds.[3] The portion that is excess subsidy given to locations between $55 and the alternate technology cutoff is $1,325,146,800.[4] The excess subsidy given to locations between $50 and $55 over the five-year term of Phase II CAF is $125,504,258.[5] These subsidies not only would provide operators with excess returns, they would also deprive 242,362[6] truly high-cost locations of guaranteed wireline broadband. So apparently small changes in the take rate can lead to massive misallocations of CAF funds.

The take rate used should be the terminal broadband take rate of the expected funding period, not a blended take rate that averages adoption over the funding period.

As noted previously, in a typical network investment, the fixed cost of the network up to the curb of potential subscribers is incurred upfront, while the variable ("success-based") costs of a drop, network interface device and customer premise equipment are not incurred until locations subscribe to the operator's service. This reduces the risk that operators will invest in infrastructure that will go unused, and reduces the present cost of the network investment because the value of money declines over time.

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3 To determine the excess subsidies, we changed the target benchmark from $50 to $55 but held the number of Remote Areas Fund ("RAF")-eligible locations constant by keeping the effective cost ceiling constant—in this case, $145. The difference in the total support-capped funding between the two support scenarios is $24,177,518 a month, or $1,450,651,058 ($24,177,518 * 12 months * 5 years).

4 4,417,156 locations overlap in the support scenarios addressed in the previous note. All of these locations receive an excess subsidy of $5 a month ($55 - $50) when the target benchmark is lowered to $50. Therefore, the excess subsidy for these locations = 4,417,156 locations * $5 * 12 months * 5 years = $1,325,146,800.

5 The excess subsidy for locations between $50 and $55 is simply the difference between the total excess subsidy ($1,450,651,058) and the excess subsidy given to locations between $50 and $145 ($1,325,146,800). 1,450,651,058 - 1,325,146,800 = 125,504,258.

6 This is the difference between the number of locations eligible for the RAF in the first two support scenarios shown on the bar chart. These support scenarios use $50 and $55, respectively, for their target benchmarks, and different alternative technology cutoff levels to reach the equivalent fund size of $1.75 billion. The 1,142,544 locations covered by the RAF in the lower benchmark scenario include the 900,182 locations covered by the RAF in the higher-benchmark scenario, plus an additional 242,362 locations. These 242,362 locations are shifted into the CAF in the higher-benchmark scenario.

The CAF model, however, compensates operators for these variable costs from the beginning of the CAF Phase II funding term. The use of a levelized costing mechanism amortizes all costs, including variable costs, over the entire term of the CAF funding. CAF recipients are subsidized for all variable success-based investments from the first day CAF funding is disbursed, even though most of the investment will not be incurred until years later.

Given the principle that the take rate used to estimate revenues should be the same as the take rate used to estimate costs, it is not reasonable to use a blended average take rate that accounts for escalating adoption over the assumed funding period. Instead, the assumed take rate should be the terminal take rate; that is, the take rate expected at the end of the assumed funding period. If operators are receiving subsidies for 80% adoption from the beginning of the funding period, their support threshold should be set based on the same assumption.[7]

The take rate used to estimate costs and revenues should be 90%.

When developing cost estimates for the National Broadband Plan, the FCC, in partnership with CostQuest Associates, developed a model for expected broadband adoption. The terminal rate of adoption in this model was nearly 90%.[8] The National Broadband Plan's adoption curve was developed by mapping the Gompertz mathematical model for forecasting technological adoption against broadband adoption data that has been collected by the Pew Internet and American Life Project[9] since 2001.

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7 Given the significant impact that small shifts in the take rate can have on the number of locations covered by the CAF and the RAF and the amount of excess subsidy provided to CAF recipients, the Wireline Competition Bureau should base its take rate for estimating revenues on actual contemporary data about broadband adoption in previously unserved areas, rather than speculative estimates. Neither the Wireline Competition Bureau nor any other commenter has provided data that validates the blended average take rates included in the chart (50% to 80%) in this Virtual Workshop. While the ACA disagrees with the approach of using a blended average take rate to estimate revenues, if the FCC chooses to follow this approach, the Commission should at least base its recommended take rate on data on broadband adoption in previously unserved areas. The best benchmarks to use would be recent data on broadband adoption over a five-year period in previously unserved areas.

8 *See* Omnibus Broadband Initiative, *The Broadband Availability Gap: OBI Technical Paper No. 1*, at 45, 48.

9 The Pew survey question from which the data is drawn asks about home Internet adoption via wireline broadband (DSL, FTTH, cable), wireline narrowband (dial-up) and non-phone/tablet wireless (satellite, USB dongle, fixed wireless) Internet usage. It does not ask about mobile broadband via a phone or tablet.

The most recent instances of this survey showed broadband adoption among US adults at 65% in December 2012, and 66% in April 2012.[10] Plotting this data point on the FCC's forecast broadband adoption curve suggests that nearly 90% adoption will be reached within six years. Given the five-year term of CAF Phase II, and the fact that funding will not be distributed until 2014,[11] it seems likely that broadband adoption will reach nearly 90% by the end of CAF Phase II.

As we previously argued, the broadband take rate used for estimating costs and revenues should be the terminal take rate of the expected funding period. Given the nature of the CAF's funding mechanism and the FCC's own approach for forecasting future broadband adoption, 90% is a reasonable take rate to use to estimate costs and revenues.

The ARPU assumption should be based on a weighted average of the ARPU of the minimum broadband and voice services required by the FCC.

Price cap carriers largely offer uniform national pricing for DSL broadband and voice services. The presence, or lack thereof, of a competitive provider in a given territory does not typically affect this pricing. Therefore, non-promotional pricing for broadband and voice from any area where 4/1 broadband or greater is available provides useful benchmarks upon which to base the ARPU threshold.

Given the unequal distribution of CAF-eligible locations across different operators' service areas, the simplest and most equitable way to average these ARPUs is to weight the ARPUs by each price cap carriers' share of total CAF-eligible locations.[12]

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10 *See Trend Data (Adults)*, http://www.pewinternet.org/Trend-Data-(Adults)/Home-Broadband-Adoption.aspx, accessed June 3, 2013.

11 This estimate is based on the timelines set forth in the Report and Order detailing the challenge process to be used to finalize the list of areas eligible for CAF Phase II support and the process for carriers to accept state-level commitments. The challenge process includes a 45-day period for challenges to the status of a given area, and an additional 45-day period for rebuttals to these challenges. Once the Wireline Competition Bureau adjudicates on these challenges and rebuttals and finalizes the list of CAF-eligible areas, price cap carriers have 120 days to accept funding on a state-by-state basis. The total of these periods is 210 days (45 + 45 + 120). Given the deadline for comments for the Virtual Workshop in question is June 18, 2013 (day 169 of the year, with 196 remaining), funding will not be awarded until after January 1, 2014. *See* Report and Order, DA 13-1113 (May 16, 2013), para 21, 24.

12 An alternative, theoretically ideal method to determine the support threshold would be to weight the ARPUs based on CAF-funded, rather than merely CAF-eligible, locations but this is nearly impossible in practice to calculate because the number of CAF-eligible locations is dependent on the support threshold.

Additionally, while advertised non-promotional pricing for 4/1 broadband and voice service is a reasonable proxy for ARPU, it does not capture the entire ARPU for customers subscribing to both 4/1 broadband and voice services. In the case of packages that do not include unlimited calling,[13] some subscribers will incur additional voice usage charges. So any analysis based on pricing benchmarks will inevitably be conservative.

Based on ACA's research, the recommended ARPU benchmark should be $71.

For this analysis, we first determined the mix of CAF-eligible locations located within each price cap carriers' territory using the latest version of the Connect America Cost Model. We then researched the lowest non-promotional, non-contract price advertised for broadband that had at least 4 Mbps downstream and 1 Mbps upstream and voice packages with unlimited local and long-distance minutes, if available. In the cases where pre-packaged bundled offers meeting those requirements were cheaper than a la carte pairings, we used those prices as benchmarks. The output of ACA's research and analysis is below:

ILEC	CAF-Eligible Locations	% of Total	4/1 Double-Play ARPU
Alaska Communication Systems	51,090	0.3%	$89.00
AT&T	7,332,021	37.7%	$81.00
Cincinnati Bell	18,116	0.1%	$56.99
CenturyLink	4,812,513	24.7%	$59.90
Consolidated Communications	91,482	0.5%	$76.98
Fairpoint	330,056	1.7%	$73.99
Frontier	2,514,742	12.9%	$80.98
Micronesian Telecom	21,790	0.1%	Not available
Hawaiian Telecom	33,605	0.2%	$39.95
Claro Puerto Rico	654,911	3.4%	$72.99
Virgin Islands Telephone Corporation	56,954	0.3%	$101.60
Verizon	2,082,957	10.7%	$54.99
Windstream	1,459,923	7.5%	$64.99
Totals/Averages	**19,460,160**	**100.0%**	**$71.28**

[13] The International Bureau of the FCC, in its third annual International Broadband Data Report, used voice services with unlimited local and long distance when benchmarking voice and double-play prices across 29 international markets. We follow that precedent for our benchmarking exercise, although a few price cap carriers do not appear to offer unlimited long distance minutes. *See International Broadband Data Report*, IB Docket No. 10-171, GN Docket No. 11-121, Third Report, 27 FCC Rcd 9884, 9904 (Int'l Bur. 2012).

ACA's recommended support threshold is $64, based on a 90% take rate and $71 ARPU benchmark.

Given the following arguments previously set forth:

- The take rate used to estimate costs should be the same take rate used to estimate revenues,
- The take rate used for both the cost and revenue estimates should be the terminal take rate,
- A 90% take rate can reasonably be expected by the end of the funding period, and
- A conservative ARPU benchmark is $71,

the support threshold should be no less than $64.